

# WEST Search History

DATE: Wednesday, January 29, 2003

## Set Name Query

side by side

DB USPT,PGPB,JPAB,DWPI; PLUR YES; OP ADJ

		<u>Hit Count</u>	<u>Set Name</u>
			result set
L9	L5 and PTN	0	L9
L8	L5 and AOX1	4	L8
L7	L5 and Pichia	22	L7
L6	L5 and MK	1	L6
L5	l1 or l2 or l3 or L4	81	L5
L4	MFalpha1 or alpha pheromone or alpha-pheromone	35	L4
L3	alpha 1 factor	5	L3
L2	MF alpha 1	44	L2
L1	MF alpha 1 same saccharomyces cerevisiae	12	L1

END OF SEARCH HISTORY



OIBIB ..... OIBIB indented with text labels

SBIB ..... BIB no citations

SIBIB ..... IBIB, no citations

HIT ..... Fields containing hit terms

HITIND ..... IC ICA ICI NCL CC and index field (ST and IT) containing hit terms

HITRN ..... HIT RN and its text modification

HITSTR ..... HIT RN, its text modification, its CA index name, and its structure diagram

HITSEQ ..... HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields

FHITSTR ..... First HIT RN, its text modification, its CA index name, and its structure diagram

FHITSEQ ..... First HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields

KWIC ..... Hit term plus 20 words on either side

OCC ..... Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field

codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (>). Examples of formats include TI, TI,AU, BIB, ST, TI,IND, TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number

ENTER DISPLAY FORMAT (BIB)

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'Y' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats

ABS ..... GI and AB

ALL ..... BIB, AB, IND, RE

APPS ..... AI, PRAI

BIB ..... AN, plus Bibliographic Data and PI table (default)

CAN ..... List of CA abstract numbers without answer numbers

CBIB ..... AN, plus Compressed Bibliographic Data

DALL ..... ALL delimited (end of each field identified)

DMAX ..... MAX, delimited for post-processing

FAM ..... AN, PI and PRAI in table, plus Patent Family data

FBIB ..... AN, BIB, plus Patent FAM

IND ..... Indexing data

IPC ..... International Patent Classifications

MAX ..... ALL, plus Patent FAM, RE

PATS ..... PI, SO

SAM ..... CC, SX, TI, ST, IT

SCAN ..... CC, SK, TI, ST, IT (random display, no answer numbers

SCAN must be entered on the same line as the DISPLAY,

e.g., D SCAN or DISPLAY SCAN)

STD ..... BIB, IPC, and NCL

IABS ..... ABS indented with text labels

IALL ..... ALL, indented with text labels

IBIB ..... BIB indented with text labels

IMAX ..... MAX, indented with text labels

ISTD ..... STD, indented with text labels

OBIB ..... AN, plus Bibliographic Data (original)

OIBIB ..... OIBIB, indented with text labels

SBIB ..... BIE, no citations

SIBIB ..... IBIB, no citations

HIT ..... Fields containing hit terms

HITIND ..... IC ICA ICI NCL CC and index field (ST and IT) containing hit terms

HITRN ..... HIT RN and its text modification

HITSTR ..... HIT RN, its text modification, its CA index name, and its structure diagram

HITSEQ ..... HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields

FHITSTR ..... First HIT RN, its text modification, its CA index name, and its structure diagram

FHITSEQ ..... First HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields

KWIC ..... Hit term plus 20 words on either side

OCC ..... Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field

codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (>). Examples of formats include TI, TI,AU, BIB, ST, TI,IND, TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number

#### ENTER DISPLAY FORMAT (BIB) bib

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

AN 2000133856 CAPLUS

DN 132 17968

TI Mass secretion/expression system for unglycosylated human \*\*\*MK\*\*\* family proteins in methylotrophic yeast

IN Murasugi, Akira, Asami, Yukio, Kido, Isao, Kumai, Hideshi

PA Meiji Milk Products Co. Ltd., Japan

SO PCT Int Appl 58 pp

CODEN PIJD2

DT Patent

LA Japanese

FAN CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2000139718 A1 20000224 WO 1999 JP4332 19990810

W AU, CA, CN, JP, KR, US

RW AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, LT, LV, FI, RO

CA 2339350 AA 20000224 CA 1999-2339350 19990810

AU 9950674 A1 20000306 AU 1999-50674 19990810

EP 1106697 A1 20010613 EP 1999-935123 19990810

R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI JP 1998-236621 A 19980810

JP 1999-849483 A 19990326

WO 1999-JP4332 W 19990810

RE CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FFORMAT

=> d his

(FILE 'HOME' ENTERED AT 13 06 28 ON 29 JAN 2003)

FLE BIOS 3 EMBASE CAPLUS ENTERED AT 13 06 37 ON 29 JAN 2003

L1 494 S A, PHA PHEROMONE OR MFA1 PHA1 OR MF ALPHA 1 OR MF ALPHA1 OR ALP

L2 1 S L1 AND MK

=> s h1 and (methylotrophic yeast or Pichia)

L3 19 L1 AND (METHYLOTROPHIC YEAST OR PICHI)

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 15 DLP REM L3 (4 DUPLICATES REMOVED)

=> d bib abs 1

YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N) y

L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002 575222 CAPLUS

DN 137 136056

TI Combinatorial expression libraries with individual members of the library containing concatemers of expression cassettes

IN Godsmith, Neil, Sorensen, Alexandra M, P. Santana, Nielsen, Soren V, S.

PA Evolva Biotech A/S, Den

SO PCT Int Appl 115 pp

CODEN PIJD2

DT Patent

LA English

FAN CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002059297 A2 20020801 WO 2002-DK 56 20020125

W AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, L'V, MA, MD, MG, MK, MN, MW, MX, MZ, NC, NZ, OM, PH,

PL, PT, RO, RU, SD, SE, SG, S, SK, SL, TJ, TM, TN, TR, TT, TZ,

UA, UC, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,

TJ, TM, RW, GH, GM, KE, LS, MW, MZ, SD, S, SZ, TZ, UG, ZM, ZW, AT, BE, CH,

CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI DK 2001-128 A 20010125

DK 2001-679 A 20010501

US 2001-300863P P 20010627

AB Combinatorial gene expression libraries in which recombination between individual sequences can take place within an individual cell and methods of constructing such libraries are described. Each member of the library

contains a large no. of expression cassettes that are randomly selected from a pool of cassettes during the construction of the library.

Individual expression cassettes are flanked by a common pair of restriction sites and have the same promoter and terminator to regulate expression of the cloned inserts. The library of concatemers is created from a library of individual clones. This primary library, typically a cDNA library, has the individual cassette and its flanking restriction sites flanked by a second pair of restriction sites. The cassettes are released from the library and ligated into concatemers that are then

cloned into a vector capable of stabilizing large inserts, esp. artificial

chromosomes. The variability within the combinatorial library can be increased by using cDNA libraries from multiple sources. Cassettes within the library are free to recombine with one another to create genes encoding novel activities or functions that can be identified by selection or screening. Such libraries are useful in discovery of novel or modified metabolic pathways leading to the prodn of novel compds for e.g. drug discovery and to the prodn of known compds in novel quantities or in novel compartments of the cells. The expression libraries in particular are composed of host cells capable of coordinated and controllable expression of large nos. of heterologous genes in the host cells.

L4 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002575221 CAPLUS

DN 137136055

TI Combinatorial expression libraries with individual members of the library containing concatemers of expression cassettes

IN Goldsmith Neil, Sorensen Alexandra M P, Santana Nielsen, Soren V S, Naesby, Michael

PA Evolva Biotech A/S, Den

SO PCT Int Appl, 124 pp

CODEN PIKD2

DT Patent

LA English

FAN CNT 1

PATENT NO KIND DATE APPLICATION NO. DATE

PI WO 2002059296 A2 20020801 WO 2002-DK55 20020125  
W, AE, AG, AL, AM, AT, A, J, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, D, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, LA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW, GH, CM, KE, LS, MW, M\*, SL, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI DK 2001127 A 20010125

US 2001-3C1022P P 20010627

AB Combinatorial gene expression libraries in which individual clones contain large nos. of expression cassettes and methods of constructing such libraries are described. Each member of the library contains a large no. of expression cassettes that are randomly selected from a pool of cassettes during the construction of the library. Individual expression cassettes are flanked by a common pair of restriction sites and have the same promoter and terminator for uniform regulation of expressn of the cloned inserts. The library of concatemers is created from a library of individual clones. This primary library, typical of a cDNA library, has the individual cassette and its flanking restriction sites flanked by a second pair of restriction sites. The cassettes are released from the library and ligated into concatemers that are then cloned into a vector capable of stabilizing large inserts, esp. artificial chromosomes. The variability within the combinatorial library can be increased by using cDNA libraries from multiple sources. Such libraries are useful in discovery of novel or modified metabolic pathways leading to the prodn of novel compds for e.g. drug discovery and to the prodn of known compds in novel quantities or in novel compartments of the cells. The expression libraries in particular are composed of host cells capable of coordinated and controllable expression of large nos. of heterologous genes in the host cells.

L4 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 200210523 CAPLUS

DN 13685975

TI Termiticin temycin and cDNA and their use in protection of plants from phytopathogenic fungi

IN Lamberty, Mireille, Bulet, Philippe, Latorse, Marie pascale, Hoffmann, Jules

PA Rhobio F

SO PCT Int Appl, 34 pp

CODEN PIKD2

DT Patent

LA French

FAN CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002000706 A2 20020103 WO 2001-FR2028 20010627  
WO 2002000706 A3 20020321  
W, AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, B-, KG, KZ, MD, RU, TJ, TM  
RW, GH, CM, KE, LS, MW, M\*, SL, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
FR 2810993 A1 20020104 FR 2000-8374 20000629  
FR 2810993 B1 20020823

PRAI FR 2000-8374 A 20000629

AB The invention concerns an antimicrobial peptide of the family of defensins, in particular antifungal, called temycin, DNA encoding said peptide vectors contg them for transforming a host organism and the

method for transforming said organism. The invention also concerns transformed organisms in particular yeast, or plant cells and plants, the temycin produced by the transformed plants providing them with resistance to fungus-mediated diseases. Thus, the cDNA for *Pseudacanthotermes sp.* temycin was expressed in *Saccharomyces cerevisiae*. The yeast

\*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* promoter prepro sequence and terminator were used to control expression and protein secretion. The recombinant temycin exhibited antifungal activity against *Cercospora feniensis*, *Botrytis cinerea*, *Septoria nodorum*, *S. tritici*, *Rhizoctonia solani*, *Fusarium graminearum* and *F. nivale*.

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002533549 CAPLUS

TI Glutamic acid and alanine spacer is not necessary for removal of \*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* signal sequence fused to the human growth hormone produced from \*\*\*Pichia\*\*\* pastoris

AU Euwirachitr, Lily, Roytrakul, Sittruk, Suprasongsin, Chittiwat, Manitphotipit, Penappa, Parinya, Sakol

CS Institute of Molecular Biology and Genetics, BIOTEC Training Center for Genetic Engineering and Biotechnology, Mahidol University, Nakhonpathom, 73170, Thailand

SO World Journal of Microbiology & Biotechnology (2002) 18(6), 493-498  
CODEN WJMBEY ISSN 0959-3993

PB Kluwer Academic Publishers

DT Journal

LA English

AB Human growth hormone (hGH) cDNA was synthesized using codons preferred by

*Escherichia coli*, except for the first 20 amino acids, which were changed to that preferred by *Saccharomyces cerevisiae* and \*\*\*Pichia\*\*\* pastoris. Polymerase chain reaction (PCR) overlapping approach was employed to create synthetic hGH without glutamic acid-alanine (glu-ala), or with one and two glu-ala spacers (hGH1, hGH2, resp.). The necessity of a glu-ala spacer in the cleavage of *S. cerevisiae* alpha mating factor-1 (\*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* ) secreted signal from the synthetic hGH was also investigated. Three types of hGH constructs were integrated into *P. pastoris* genome, the zeocin-resistant transformants were selected and expression of hGH was detd. A 22-kDa band of secreted hGH was further detd by N-terminal peptide sequencing. The result suggested that the removal of glu-ala from the hGH1 and hGH2 was not efficient and only the hGH construct showed the complete cleavage of the signal sequence, giving a similar N-terminus as the mature hGH. hGH expression was optimized to increase the yield of the protein from the hGH construct (no glu-ala) to 190 mg/l from a 10-mL induction medium.

RE CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002633226 CAPLUS

DN 137336761

T Strain and process development for the production of human cytokines in *Hansenula polymorpha*

AU Degelmann, Adelheid, Muller, Frank, Sieber, Heike, Jenzelewski, Volker, Suckow, Manfred, Strasser, Alexander W M, Gellissen, Gerd

CS Rhein Biotech GmbH, Dusseldorf, 40595 Germany

SO FEMS Yeast Research (2002), 2(3), 349-361

CODEN FYREAG ISSN 1567-1356

PB Elsevier Science B V

DT Journal

LA English

AB The early status of strain development for the prodn of interleukin (IL)-6, IL-8, IL-10 and interferon (IFN) gamma is described. The general approach to generating such strains was to amplify gene sequences encoding the mature forms of the various cytokines by PCR from com available cDNA sources. The design of the amplicates allowed an in-frame fusion to an \*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* leader segment contained in two basic expression vectors, pTPMT121- \*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* and pTPSMT- \*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* . The two vectors differ in that one harbors the

methanol-inducible FMD promoter and the other the constitutive TPS promoter as control elements for heterologous gene expression. The most advanced process development example is that of IFN alpha -2a. Here, the MOX promoter derived from another key gene of methanol metab is used for expression control. The successful development of a prodn process for *Hansenula polymorpha*-derived IFN alpha -2a is summarized. This was achieved by combining genetic eng neering of suitable prodn strains with improved processing capabilities for the secreted cytokine, and by purifn procedures from cultures grown in yeast ext-peptone-glycerol-based media

RE CNT 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC DUPLICATE

1  
AN 2002634408 BIOSIS

DN PREV200200634408

TI Production of IFNalpha-2a in *Hansenula polymorpha*

AU Mueller, Frank, Tieke, Anni, Waschk, Dorothea, Muehle Christine Mueller, Frank, Seiglechner, Mauricio, Pesce, Analia, Jenzelewski, Volker, Gellissen, Gerd (1)

CS (1) Rhein Biotech GmbH, Eichsfelder Str. 11, 40595, Duesseldorf

g.gelissen@rheinbiotech.de Germany  
SO Process Biochemistry (September 2002) Vol 38, No 1 pp 15-25  
http://www.e-sevier.com/locate/procbio print  
ISSN 1359-5113

DT Article  
LA English

AB A DNA sequence coding for IFNaalpha-2a was expressed in the \*\*\*methylotrophic\*\*\* \*\*\*yeast\*\*\* Hansenuila polymorpha from a strong inducible promoter element derived from the MOX gene, a key gene of the methanol metabolism pathway. For secretion the coding sequence was fused to the KEX2 recognition site of the S. cerevisiae-derived \*\*\*Mfalpha1\*\*\* prepro-leader. To a large extent the secreted molecules were found to be incorrectly processed from the precursor molecule exhibiting N-terminal extensions of the mature protein. Correct processing was achieved when co-expressing a S. cerevisiae-derived KEX2 gene from its native promoter. Undesirable proteolytic cleavage at additional dibasic sites of the protein sequence could be minimised when optimising fermentation conditions. A pH/pH-controlled C-source feeding mode was applied to fermentations on a 1.5-101 scale. In cultures of a transformant strain harbouring 30 copies of the IFN expression cassette a productivity of 350 mg/l could be obtained. Various capture procedures were found to be impaired when using a standard synthetic medium for culturing. Binding to ion exchange and hydrophobic interaction matrices was regained when using a modified YPG-based culture medium.

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS  
AN 2000133856 CAPLUS

DN 132179658

T Mass secretion/expression system for unglycosylated human MK family proteins in methylotropic yeast

IN Murasugi, Akira; Asami, Yukio; Kido, Isao; Kumai, Hideshi

PA Meiji Milk Products Co., Ltd., Japan

SO PCT Int. App., 58 pp

CODEN PIKXD2

DT Patent

LA Japanese

FAN CNT 1

PATENT NO KIND DATE APPLICATION NO DATE

PI WO 2000008718 A1 20000224 WO 1999-JP4332 19990810  
W AL CA, CN JP, KR, US  
RW AT BE CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE  
CA 2339350 AA 20000224 CA 1999-2339350 19990810  
AU 9550674 A1 20000306 AU 1999-50574 19990810  
EP 1066847 A1 20010613 EP 1999-935123 19990810  
R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, MC, PT  
E SI LT LV FI RC

PRAI JP 1998-23862 A 19980810

JP 1999-84583 A 19990326

WO 1999-JP4332 W 19990810

AB Large-scale secretion/expression system for unglycosylated human MK family proteins in methylotropic yeast \*\*\*Pichia\*\*\* pastorts is described. The expression vector consists of a mature human MK family protein coding region cDNA attached to *Saccharomyces cerevisiae* \*\*\*alpha\*\*\* \*\*\*1\*\*\* \*\*\*facto\*\*\* signal sequence under the control of a

\*\*\*Pichia\*\*\* pastoris methanol-inducible alc oxidase gene (AOX1) promoter, a transcription termination sequence, and an origin of replication. Unglycosylated human MK protein and PTN protein were mass produced in \*\*\*Pichia\*\*\* pastorts GS115 and SMD123 strains, and the expressed proteins demonstrated their biol activity for facilitating growth of mouse embryo fibroblast NIH3T3

RE CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000457379 CAPLUS

DN 13384755

TI Recombinant growth factors with the biological activity of G-CSF (Granulocyte Colony Stimulating Factor)

IN Fischer, Johannes; Werret, Peter; Gelissen, Gerd; Weydemann, Ulrike; Jenze ewski, Volker; Piontek, Michael; Strasser, Alexander W

PA Rhein Biotech Gesellschaft fuer Neue Biotechnologische Prozesse und Produkte, Germany

SO Ger Offen, 22 pp

CODEN GWXKBX

DT Patent

LA German

FAN CNT 1

PATENT NO KIND DATE APPLICATION NO DATE

PI DE 19860801 A1 20000706 DE 1998 19860801 19981230  
WO 2000C40727 A2 20000713 WO 1999 EP10466 19991229  
WO 2000C40727 A3 20001026  
W AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HR, HU, ID, IL,  
IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MW, NZ,  
PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY,  
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DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF  
CG, CI, CM, GA, GN, CW, ML, MR, NE, SN, TD, TG

PRAI DE 1998-19860801 A 19981230

AB The invention provides growth factors with granulocyte colony-stimulating activity as well as nucleic acid mols which comprise sequences coding for such growth factors. Moreover the invention concerns a procedure for manufg the growth factors of the invention pharmaceutical compns comprising proteins or nucleic acids according to invention and their therapeutic use. The growth factors possess cytotoxic activities of differing expression and are able to stimulate maturation of blood cells. Is intended in particular to use the mols of the invention for treating diseases and injuries which are assocd with a lack of blood cells, e.g. cancer, leukemia, severe burns, opportunistic infections, and bone marrow transplants

RE CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999 673020 CAPLUS

DN 131308932

TI Helminin chimeric helminin-encoding genes, and transgenic plants resistant to fungi

IN Lamotte, Mireille; Bulet, Philippe; Brookhart, Gary Lee; Hofmann, Jules

PA Rhone-Poulenc Agro, Fr

SO PCT Int. Appl., 68 pp

CODEN PIKXD2

DT Patent

LA French

FAN CNT 1

PATENT NO KIND DATE APPLICATION NO DATE

PI WO 9552053 A1 19991021 WO 1994-FP843 19990412  
W AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,  
DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG,  
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FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM  
AU 2777568 B1 20021031  
CA 232658 A1 19991021 CA 1999-232658 19990412  
AU 9931525 A1 19991101 AU 1999-31525 19990412  
BR 9909745 A 2001226 BR 1999-9745 19990412  
EP 07107 A1 20/01031 EP 1999-913384 19990412  
R AT, BE, CH, DE, DK, ES, FR, GB, GR, T LI, LU, NL, SE, MC, PT  
IE, SI, LT, LV, FI, RO  
JP 200151160 T2 20020416 JP 2000-543601 19990412  
NO 2000CD05173 A 20001215 NO 2000 51/3 20001013

PRAI FR 1998-4933 A 19980415  
WO 1994-FP843 W 19990412  
AB The invent concerns helminin, a DNA sequence coding for helminin, a vector contg it for transforming a host organism and the transformation method. The invention concerns helminin as medicine, in particular for treating fungal infections. More particularly it concerns the transformation of plant cells and plants, the helminin produced by the transformed plants ensuring their resistance to diseases, in particular diseases of fungal origin. Thus, helminin was prep with recombinant *Saccharomyces cerevisiae* and its activity against fungi and yeast demonstrated. Transgenic tobacco producing helminin were prep. The helminin was not affected by the plant proteases and retained its antifungal activity for *Botrytis cinerea*. Mice injected i.v. with 10 mg helminin/kg displayed no evidence of toxicity

RE CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998 479625 CAPLUS

DN 129138245

TI Recombinant preparation of N-terminally extended heterologous proteins in yeast with improved yield

IN Kjeldsen, Thomas; Borglum, Havelund, Svend, Peterssson, Annette Frost, Balschmidt, Per

PA Novo Nordisk A/S, Den

SO PCT Int. Appl., 30 pp

CODEN PIKXD2

DT Patent

LA English

FAN CNT 4

PATENT NO KIND DATE APPLICATION NO DATE

PI WO 9828429 A1 19980702 WO 1997-D-581 19971218  
W AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,  
DK, EE, ES, FI, GB, GE, GH, GM, HW, ID, IL, IS, JP, KE, KG,  
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,  
NO, NZ, PL, PT, RD, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,  
UA, UG, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,  
FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM  
GA, GN, ML, MR, NE, SN, TD, TG  
AU 9878737 A1 19980717 AU 1998-78737 19971218  
EP 946735 A1 19991006 EP 1997-948751 19971218

R AT BE CH DE DK ES FR GB GR IT LI LU NL SE PT IE, SI LT LV FI RO	IN Achstetter, Tilman
JP 2001050574 T2 20010612 JP 1998-528258 19971218	PA Transgene S A Fr
PRAI DK 1996-1482 A 19961220	SO Eur Pat Appl 38 pp
WO 1997-DK581 W 19971218	COL-EN EPXXDW
AB Disclosed is a method for the recombinant prep. in yeast of heterologous proteins having inserted N-terminal extension EEEPEK to improve its ferment yield and protect against dipeptidyl aminopeptidase processing. The protein is prep'd by expression from a plasmid of a DNA sequence encoding SP-LP-EEEPEK-protein (SP=signal peptide LP=leader peptide) in transgenic yeast. Demonstrated was the expression of N-terminally extended insulin precursor EEEPEH-MI3 in <i>Saccharomyces cerevisiae</i> strain MT663 by using yeast YAP3 (yeast aspartic protease 3) signal peptide and synthetic LA19 leader peptide.	DT Patent
RE CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD	LA French
ALL CITATIONS AVAILABLE IN THE RE FORMAT	FAN CNT 3
L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS	PATENT NO. KIND DATE APPLICATION NO. DATE
AN 1998 65628 CAPLUS	PI EP 607080 A1 19940720 EP 1994-400062 19940111
DN 128 139418	EP 637080 B1 20010620
TI Manufacture of proinsulin and insulin and their analogs using a proteinase deficient yeast expression host	FR 2700338 A1 19940713 FR 1993-171 19930111
IN Egel-Mitani, Michi; Brandt, Jakob; Vad, Knud	FR 2700338 B1 19950331
PA Novo Nordisk A/S, Den.; Egel-Mitani, Michi; Brandt, Jakob; Vad, Knud	AT 212381 E 20010715 AT 1994-400062 19940111
SO PCT Int Appl, 32 pp	ES 2157963 T3 20010911 ES 1994-400062 19940111
CODEN PI>D2	WO 9501431 A1 19950112 WO 1994-FR780 19940628
DT Patent	W AL CA JP JS
LA English	FR AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
FAN CNT 1	AU 9471282 A1 19950114 AU 1994-71282 19940628
PATENT NO. KIND DATE APPLICATION NO. DATE	AU 656454 B2 19980910
PI WC 9801473 A1 19980115 WO 1997-DK297 19970704	EP 106567 A1 19960417 EP 1994-920523 19940628
W AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE, DK, EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC, LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT, RC RU SD SE SG SI SK SL TZ TM TR TT UA UG US UZ VN YU ZW AM AZ BY KG KZ MD R J TJ TM	EP 106567 B1 20010605
FR GH AE LS MW SD SZ UG ZW AT BE CH DE ES FI FR GE, GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA, GN, ML MR NE SN TD TG	R AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
AU 9732553 A1 19980202 AU 1997-32553 19970704	JP C9500265 T2 19970114 JP 1994-503310 19940628
PRAI DK 1996-148 WO 199607C5	ES 2157261 T3 20010816 ES 1994-920523 19940628
WO 1997-DK297 19970704	US 6077827 A 20000620 US 1995-578674 19951228
AB Yeast expression hosts lacking the YAP3 proteinase are used to manuf. insulin, proinsulin, their analogs or related proteins (e.g. IGF-1). The preferred host is <i>Saccharomyces cerevisiae</i> , but other yeasts, e.g. "Pichia", Kluyveromyces, may also be suitable. The host may also be deficient in other proteinases, e.g. BAR1, STE13. <i>S. cerevisiae</i> with the YAP3 gene insertionally inactivated with a URA3 deletion allele was constructed by std. methods. Manuf. of a proinsulin analog in such a host increased yields by 167-371% over control cells depending upon the precursor construct used.	US 627782 B1 20010811 US 2000-498346 20000204
L4 ANSWER 2 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS	US 2001-121299 A1 20020315 US 2001-909360 20010723
INC DUPLICATE	PRAI FR 1993-71 A 19930111
2	FR 1993-790 A 19920629
AN 1996 75253 B OSIS	EP 1394-400062 A 19940111
DN PREV1996-6647394	FR 1994-202 A 19940111
TI High-level secretion of hirudin by <i>Hansenula polymorpha</i> -authentic processing of three different prehirudins	WC 1994-FR780 W 19940628
AU Weydemann, L (1); Keup, P; Plontek, M; Strasser, A W M; Schweden, J; Gellissen, G; Janowicz, Z A	US 1995-578674 A3 19951228
CS (1) Rhein Biotech GmbH, Eichsfelder Str. 11, D-40595 Duesseldorf Germany	US 2000-498346 A3 20000204
SO Applied Microbiology and Biotechnology, (1995) Vol 44, No 3-4, pp 377-385	OS MARPAT 122 2781
ISSN 0175-7598	AB A sequence encoding the precursor peptide of defensin A of <i>Phormia terraenovae</i> is used in expression cassettes to direct secretion of heterologous proteins from yeasts, esp. <i>Saccharomyces cerevisiae</i> . A construct that encoded (N to C) the sequence Ser-Leu-Asp-Lys-Arg (C terminus of yeast) ***MF*** ***alpha*** ***1***, the defensin A pro sequence and the LyS-47 analog of hirudin HV2 was prep'd and placed under control of the ***MF*** ***alpha*** ***1*** promoter. <i>S. cerevisiae</i> transformed with this gene gave a titer of HV2 of 25.6 anti-thrombotic units/A600nm using an expression vector carrying a KEX2 gene.
DT Article	L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
LA English	AN 1993-96649 CAPLUS
AB A DNA sequence coding for a subtype of the hirudin variant HV1 was expressed in the ***methylotrophic*** ***yeast*** <i>Hansenula polymorpha</i> from a strongly inducible promoter derived from a gene of the methanol metabolism pathway. For secretion, the coding sequence was fused to the KEX2 recognition site of three different prepro segments engineered from the ***MF*** - ***alpha*** - ***1*** gene of <i>Saccharomyces cerevisiae</i> , the glucoamylase (GAM) gene of <i>Schwanniomyces occidentalis</i> and the gene for a crustacean hyperglycemic hormone from the shore crab <i>Carcinus maenas</i> . In all three cases, correct processing of the precursor molecule and efficient secretion of the mature protein were observed. In fermentations on a 10-l scale of a transformant strain harbouring a ***MF*** - ***alpha*** - ***1*** /hirudin-gene fusion yields in the range of grams per litre could be obtained. The majority of the secreted product was identified as the full-length 65-amino-acid hirudin. Only small amounts of a truncated 63-amino-acid product, frequently observed in <i>S. cerevisiae</i> -based expression systems, could be detected.	DN 1*8-96649
L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS	TI Secretory manufacture of human serum albumin with methylotrophic yeasts
AN 1995 87198 CAPLUS	IN Davis, Geneva Ruth; Provost, Sally Ann
DN 1222781	PA Sak Institute Biotechnology/Industrial Assoc., Inc., USA
TI Use of the proform of defensin A in the secretion of heterologous proteins from yeast cells	SO PCT Int Appl, 74 pp
CODEN PI>D2	CODEN PI>D2
DT Patent	PATENT NO. KIND DATE APPLICATION NO. DATE
LA English	PI WO 9213951 A1 19920810 WO 1992-US1015 19920204
FAN CNT 1	PRAI US 1991-650C40 19910204
PATENT NO. KIND DATE APPLICATION NO. DATE	AB Human serum albumin (HSA) is manuf'd in a ***methylotrophic*** ***yeast*** / ***Pichia*** pasteur(s) by expression of the gene from a MeOH responsive promoter and the use of <i>Saccharomyces</i> or human secretory signals to ensure efficient secretion. The promoter of the <i>P. pastoris</i> a/c oxidase gene (AOX1) gene and the signal sequence from the <i>S. cerevisiae</i> alpha-mating factor gene or the human serum albumin gene signal sequence are used and the expression construct is integrated into the host genome. A synthetic gene for HSA with codon usage optimized for expression in ***P.chia*** was constructed by std. methods and placed under control of the AOX1 promoter with the human or yeast signal sequence. Different vectors had different copy nos. of the expression cassette. The vector contains a sequence that directs integration into the HIS4 gene of ***P.chia***. Fermentation regimes that maximized biomass yield by growth on glycerol as C source followed by induction with MeOH efficiently yielded cross-reacting material of the correct mol wt.
L4 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS	PRAI US 1991-650C40 19910204
INC DUPLICATE	DN BA94-6088
3	TI EXPRESSION AND SECRETION OF HUMAN GROWTH HORMONE IN THE ***METHYLOTROPHIC*** ***YEAST*** <i>HANSENULA POLYMORPHA</i>
AN 1992 302938 B OSIS	AU APRIKIAN, P. G.; KARPYCHEV, V. MIHALIOV, V. M.; GRACHEVA, V. D.; SHCHECRIN, A. M.
DN BA94-6088	BEBUROV, M. Yu.; EL'DAROV, M. A.; SKRYABIN, K. G.
TI Expression and Secretion of Human Growth Hormone in the ***METHYLOTROPHIC*** ***YEAST*** <i>HANSENULA POLYMORPHA</i>	CS ENG CENT "BIOENG", ACAD SCI RUSS, MOSCOW RUSS
PRAI US 1991-650C40 19910204	SO DOFI AKAD NAUK SSSR (1991) 321 (2), 390-394

CODEN DANKAS ISSN 0002-3264  
FS BA OLD  
LA Russian

AB Regularities in the biosynthesis and secretion of human growth hormone [hGH] were studied in a recombinant H. polymorpha strain carrying hGH gene controlled by the promoter and terminator zones of methanol oxidase gene and signal sequence of the \*\*\*MF\*\*\* \*\*\*alpha\*\*\* \*\*\*1\*\*\* gene of *Saccharomyces cerevisiae* sex pheromone. Data were presented on the ELISA determination of hGH concentrations in media and in cells. It was shown that the presence of a single copy of integrated recombinant plasmid pHG alpha H is sufficient for maintaining a higher level of expression and efficient secretion of hGH.

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NEWS 3 Apr 09 BEILSTEIN Reload and Implementation of a New Subject Area  
NEWS 4 Apr 09 ZDB will be removed from STN  
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB  
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS  
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER  
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available  
NEWS 9 Jun 03 New e-mail delivery for search results now available  
NEWS 10 Jun 10 MEDLINE Reload  
NEWS 11 Jun 10 PCTFULL has been reloaded  
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment  
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002.  
saved answer sets no longer valid  
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY  
NEWS 15 Jul 30 NETFIRST to be removed from STN  
NEWS 16 Aug 08 CANCERLIT reload  
NEWS 17 Aug 08 PHARMAMarket Letter(PHARMAML) - new on STN  
NEWS 18 Aug 08 NTIS has been reloaded and enhanced  
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
now available on STN  
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded  
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded  
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file  
NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA  
NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985  
NEWS 27 Oct 21 EVENTLINE has been reloaded  
NEWS 28 Oct 24 BEILSTEIN adds new search fields  
NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN  
NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002  
NEWS 31 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 32 Nov 25 More calculated properties added to REGISTRY  
NEWS 33 Dec 02 TBKAT will be removed from STN  
NEWS 34 Dec 04 CSA files on STN  
NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date  
NEWS 36 Dec 17 TOXCENTER enhanced with additional content  
NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 38 Dec 30 ISMEC no longer available  
NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS  
NEWS 40 Jan 21 NUTRACEUT offering one free connect hour in February 2003  
NEWS 41 Jan 21 PHARMAML offering one free connect hour in February 2003

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AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002  
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NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
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1 FACTOR OR ALPHA1 FACTOR

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L2 162 L1 AND (AOX1 (3S) PROMOTER OR TERM?)

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PROCESSING COMPLETED FOR L2  
L3 96 DUP REM L2 (68 DUPLICATES REMOVED)

=> s l3 and py<=1999  
2 FLES SEARCHED  
L4 78 L3 AND PY<=1999

=> s l4 and ptn  
L5 0 L4 AND PTN

=> d bib abs l4 1-10

L4 ANSWER 1 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS  
INC  
AN 1999 527694 BIOSIS  
DN PREV19990527694

T1 Novel secretion system of recombinant *Saccharomyces cerevisiae* using an N-  
\*\*\*terminus\*\*\* residue of human IL-1beta as secretion enhancer

AU Lee, Jeewon, Choi, Seong-Ji, Jang, Jun Sung, Jang, Kyoung, Moon, Jae  
Woong, Bae, Cheon Soon, Yang, Doo Suk, Seong, Bak Lin (1)

CS (1) Department of Biotechnology, College of Engineering and Bioproducts  
Research Center, Yonsei University, Seoul, 120-749 South Korea

SO Biotechnology Progress ( \*\*\*Sept. Oct., 1999\*\* ) Vol. 15, No. 5 pp  
884-890

ISSN 8756-7938

DT Article

LA English

SL English

AB An N- \*\*\*terminus\*\*\* sequence of human interleukin 1beta (hIL-1beta) was used as a fusion expression partner for the production of two recombinant therapeutic proteins, human granulocyte-colony stimulating factor (hG-CSF) and human growth hormone (hGH), using *Saccharomyces cerevisiae* as a host. The expression cassette comprised the leader sequence of killer toxin of *Kluyveromyces lactis*, the N- \*\*\*terminus\*\*\* 24 amino acids (Ser5-Ala28) of mature hIL-1beta, the KEX2 dibasic endopeptidase cleavage site, and the target protein (hG-CSF or hGH). The gene expression was controlled by the inducible UASgal/ \*\*\*MF\*\*\* -

\*\*\*alpha1\*\*\* promoter. With the expression vector above, both recombinant proteins were well secreted into culture medium with high secretion efficiencies, and especially, the recombinant hGH was accumulated up to around 1.3 g/L in the culture broth. This is due presumably to the significant role of fused hIL-1beta as secretion enhancer in the yeast secretory pathway. In our recent report, various immunoblotting analyses have shown that the presence of a core N-glycosylation resident in the hIL-1beta fragment is likely to be of crucial importance in the high-level secretion of hG-CSF from the recombinant *S. cerevisiae*. When the N-glycosylation was completely blocked with the addition of fumicamycin to the culture, the secretion of hG-CSF and hGH was decreased to a negligible level although the other host-derived proteins were well secreted to the culture broth regardless

of the presence of tunicamycin. The N-\*\*\*terminus\*\*\* sequencing of the purified hG-CSF verified that the hIL-1 $\beta$  fusion peptide was correctly removed by *in vivo* KEX2 protease upon the exit of fusion protein from Golgi complex. From the results presented in this article it is strongly suggested that the N-\*\*\*terminus\*\*\* fusion of the hIL-1 $\beta$  peptide could be utilized as a potent secretion enhancer in the expression systems designed for the secretory production of other heterologous proteins from *S. cerevisiae*.

#### L4 ANSWER 2 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1997 454294 BIOSIS

DN PREV199799753497

TI Isolation and characterization of kar2-404 mutation in *Saccharomyces cerevisiae*

AU Kawamura-Watabe, Akiko, Tokunaga, Masao (1)

CS (1) Mitsubishi Kasei Inst. Life Sci., 11 Minamiooya, Machida-shi, Tokyo 194 Japan

SO Bioscience Biotechnology and Biochemistry, (1997) Vol. 61 No. 7 pp 1172-1178

ISSN 0916-8451

DT Article

LA English

AB We have devised a direct screening method to isolate mutations in the KAR2 gene, and have isolated a BiP/KAR2 mutant, kar2-404 from *Saccharomyces cerevisiae* as a small halo-forming mutant of secreted mouse alpha-amylase. The mutation site was identified as a point mutation at t1337 to c1337 resulting in the Ile404Thr mutation of mature Kar2404p, located at the most NH-2-\*\*\*terminus\*\*\* first beta sheet structure (beta-1) of the putative peptide-b<sub>n</sub>ding domain. This isoleucine is highly conserved in the Hsp70 family. By pulse-chase experiments, no obvious difference was detected in the intracellular secretion rate of \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - preproto-signal-mouse-alpha-amylase between the wild type and the kar2-404 mutant. However, only about half the amount of secreted heterologous protein, mouse alpha amylase, was detected in the mutant culture medium compared with wild type. A smaller amount of homologous protein, alpha-factor, was also detected and decreased faster in the mutant culture medium than in wild type. Kar2404p was expressed about 3-fold more than wild type Kar2p, probably to cover its defective functions, and the turnover rates of Kar2p and Kar2-404p were about the same *in vivo*. The purified Kar2-404p was slightly more sensitive to chymotryptic digestion than Kar2p *in vitro*.

#### L4 ANSWER 3 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1997 365427 BIOSIS

DN PREV199799657360

TI Over-expression of the *Saccharomyces cerevisiae* exo-beta-1,3-glucanase gene together with the *Bacillus subtilis* endo-beta-1,3,1,4-glucanase gene and the *Butyrivibrio fibrisolvens* endo-beta-1,4-glucanase gene in yeast

AU Van Rensburg, Pierre, Van Zyl, Willem H, Pretorius, Isak S (1)

CS (1) Inst. Wine Biotechnol, Dep. Microbiol, Univ. Stellenbosch, Stellenbosch 7600 South Africa

SO Journal of Biotechnology, (1997) Vol. 55 No. 1 pp 43-53

ISSN 0168-1656

DT Article

LA English

AB The EXG1 gene encoding the main *Saccharomyces cerevisiae* exo-beta-1,3-glucanase was cloned and over-expressed in yeast. The *Bacillus subtilis* endo-1,3,1,4-beta-glucanase gene (beg1) and the *Butyrivibrio fibrisolvens* endo-beta-1,4-glucanase gene (end1) were fused to the secretion signal sequence of the yeast mating pheromone alpha-factor ( \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - S) and inserted between the yeast alcohol dehydrogenase II gene promoter (ADH2p) and \*\*\*terminator\*\*\* (ADH2-T). Constructs ADH2-PME-alpha-1-S-beg1-ADH2-T and ADH2p - \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - S-end1-ADH2-T, designated BEG1 and END1, respectively, were expressed separately and jointly with EXG1 in *S. cerevisiae*. The construction of ura1 ura3 *S. cerevisiae* strains allowed for the autoselection of these multicopy URA3-based plasmids in rich medium. Enzyme assays confirmed that co-expression of EXG1, BEG1 and END1 enhanced glucan degradation by *S. cerevisiae*.

#### L4 ANSWER 4 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1997 226684 BIOSIS

DN PREV19979951400

TI Cloning of the *Bacillus pumilus* beta-xylosidase gene (xynB) and its expression in *Saccharomyces cerevisiae*

AU La Grange, D C, Pretorius, I S, Van Zyl W H (1)

CS (1) Dep. Microbiol, Univ. Stellenbosch, Victoria St, Stellenbosch 7600 South Africa

SO Applied Microbiology and Biotechnology, (1997) Vol. 47, No. 3, pp 262-266

ISSN 0175-7598

DT Article

LA English

AB A genomic DNA library of the bacterium *Bacillus pumilus* PLS was constructed and the beta-xylosidase gene (xynB) was amplified from a 3-kb genomic DNA fragment with the aid of the polymerase chain reaction technique. The amplified xynB gene was inserted between the yeast alcohol dehydrogenase II gene promoter (ADH2-P) and \*\*\*terminator\*\*\* (ADH2-T)

sequences on a multicopy episomal plasmid (pDLG11). The xynB gene was also

fused in-frame to the secretion signal sequence of the yeast mating pheromone alpha-factor ( \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - S) before insertion between the ADH2-P and ADH2-T sequences on a similar multicopy episomal plasmid (pDLG12). The resulting construct ADH2-P, \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - S-xynB-ADH2-T was designated XLO1. Both plasmids pDLG11 and pDLG12 were introduced into *Saccharomyces cerevisiae* but only the expression of the XLO1 gene yielded biologically functional beta-xylosidase. The total beta-xylosidase activity remained cell-associated with a maximum activity of 0.09 nkat/m<sup>3</sup> obtained when the recombinant *S. cerevisiae* strain was grown for 143 h in synthetic medium. The temperature and pH optima of the recombinant Xlo1 enzyme were 45-50 degree C and pH 6.6 respective y. The enzyme was thermostable at 45 degree C however, at 60 degree C most of the Xlo1 was inactive after 5 min.

#### L4 ANSWER 5 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1996 484724 BIOSIS

DN PREV19969919980

TI Co expression of a *Phanerochaete chrysosporium* cellobiohydrolase gene and a *Butyrivibrio fibrisolvens* endo-beta-1,4-glucanase gene in *Saccharomyces cerevisiae*

AU Van Rensburg, Pierre, Van Zyl, Willem H, Pretorius, Isak S (1)

CS (1) Dep. Microbiol, Inst. Wine Biotechnol, Univ. Stellenbosch, Stellenbosch 7600 South Africa

SO Current Genetics, (1996) Vol. 30, No. 3, pp 246-250

ISSN 0172-8083

DT Article

LA English

AB A cDNA fragment encoding the *Phanerochaete chrysosporium* cellobiohydrolase

(cbh1-4) was amplified and cloned with the aid of the polymerase chain reaction (PCR) technique. The cbh1-4 gene and the *Butyrivibrio fibrisolvens* endo-beta-1,4-glucanase (end1) gene were successfully expressed in *Saccharomyces cerevisiae* under the control of the phosphoglycerate kinase-I (PGK1) and alcohol dehydrogenase-II (ADH2) gene promoters and \*\*\*terminators\*\*\*, respectively. The native P. chrysosporium signal sequence mediated secretion of cellobiohydrolase in *S. cerevisiae*, whereas secretion of the endo-beta-1,4-glucanase was directed by the signal sequence of the yeast mating pheromone alpha-factor ( \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* - S). These constructs, designated CBH1 and END1, respectively, were expressed separately and jointly in *S. cerevisiae*. The construction of ura1 ura3 *S. cerevisiae* strains allowed for the autoselection of these multicopy URA3-based plasmids in rich medium. Enzyme assays confirmed that co-expression of CBH1 and END1 synergistically enhanced cellulose degradation by *S. cerevisiae*.

#### L4 ANSWER 6 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1996 121990 BIOSIS

DN PREV199698694125

TI Recombinant outer-surface protein A (des-Cys-1-OspA) from the Lyme disease spirochete *Borrelia burgdorferi*: High production levels in *Saccharomyces cerevisiae* yeast cultures

AU Mendoza-Vega, O (1), Keppi E, Bouchon, B, Nguyen, M, Achstetter, T

CS (1) Transgene S A, 11 rue Molshem 67082 Strasbourg Cedex France

SO Applied Microbiology and Biotechnology, (1996) Vol. 44, No. 5, pp 624-628

ISSN 0175-7598

DT Article

LA English

AB The recombinant outer-surface protein A with an N-\*\*\*terminally\*\*\* truncated form (des-Cys-1-OspA) from the Lyme disease spirochete *Borrelia burgdorferi* was expressed in *Saccharomyces cerevisiae* at high production levels. Since the recombinant vaccine candidate expressed in Escherichia coli exhibits low production yields and the purification of lipoproteins appears to be difficult, we have investigated the secretion of a soluble recombinant OspA in the yeast *S. cerevisiae*. In this way, a Leu<sup>+</sup> derivative of *S. cerevisiae* cl3ABYS86 was used as the host strain transformed with an expression plasmid containing the gene encoding des-Cys-1-OspA and driven by the \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* promoter. The fed-batch culture results revealed that an efficient secretion of des-Cys-1-OspA is obtained with a high production level of about 2.1 g l<sup>-1</sup> at a cell density of 101 g l<sup>-1</sup> cell dry weight. The accumulation of recombinant protein in the supernatant exceeds 6% of the total yeast proteins when estimated by sodium dodecyl sulphate/polyacrylamide gel electrophoresis. Moreover, des-Cys-1-OspA showed lower solubilities at high cell densities and, as a consequence, a fraction of the recombinant protein precipitated. An internal cleavage of the \*\*\*Me\*\*\* - \*\*\*alpha\*\*\* - \*\*\*1\*\*\* pro des-Cys-1-OspA precursor was also detected. However, in this case the cleavage occurred at a frequency such that the large amounts of the secreted des-Cys-1-OspA could be employed for the evaluation of an immunogenic effect on animal immunization. These studies will extend the knowledge of the usefulness of OspA as a vaccine for Lyme borreliosis.

#### L4 ANSWER 7 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1996 106477 BIOSIS

DN PREV199698678612

TI Highly efficient secretion of heterologous proteins from *Saccharomyces cerevisiae* using inulinase signal peptides

AU Chung Bong Hyun (1); Nam Soo Wan Kim, Byung Moon Park, Young Hoon CS, (1) Korea Res Inst Biosci Biotechnol, P O Box 115, Yusong, Taejon 305-600 South Korea

SO Biotechnology and Bioengineering, (1996) Vol 49 No 4 pp 473-479  
ISSN 0006-3592

DT Article  
LA English

AB The INU genes of *Kluyveromyces marxianus* encode inulinas which are readily secreted from *Saccharomyces cerevisiae* into the culture medium. To evaluate the utility of the INU signal peptides for the secretion of heterologous proteins from *S. cerevisiae*, a variety of expression and secretion vectors were constructed with GAL4 promoter and GAL7 "terminator". The coding sequence for human lipocortin-1 (LC1) was inserted in-frame with the INU signal sequences, and then the secretion efficiency and localization of LC1 were investigated in more detail and compared with those when being expressed by the vector with the "MF\*\*\* - "alpha\*\*\* - "I\*\*\*" leader peptide. The vector systems with INU signal peptides secreted ca. 95% of the total LC1 expressed into the extracellular medium while the "MF\*\*\* - "alpha\*\*\* - "I\*\*\*" leader peptide-containing vector resulted in very low secretion efficiency below 10%. In addition, recombinant human interleukin-2 (IL-2) was expressed and secreted with the vector systems with INU signal peptide and a majority fraction of the human IL-2 expressed was found to be secreted into the extracellular medium as observed in LC1 expression.

L4 ANSWER 8 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1995 361980 BIOSIS  
DN PREV199598376280

TI CycMs3, a novel B-type alpha/alpha cyclin gene, is induced in the G<sub>0</sub>-to-G<sub>1</sub> transition of the cell cycle

AU Meskiene, Irute; Bogre, Laszlo; Dahl, Marlis; Pirck, Manfred; Dang Thi Cam Ha; Swoboda, Ines; Heberle-Bors, Erwin; Ammerer, Gustav; Hirt, Herbert (1)

CS (1) Vienna Biocent Inst Microbiol and Genet, Dr. Bohrgasse 9, A-1030 Vienna Austria

SO Plant Cell, (1995) Vol 7, No 6, pp 759-771  
ISSN 1040-4651

DT Article  
LA English

AB Cyclins are key regulators of the cell cycle in all eukaryotes. We have previously isolated two B type cyclin genes, cycMs1 and cycMs2, from alfalfa that are primarily expressed during the G<sub>2</sub>-to-M phase transition and are most likely mitotic cyclin genes. Here, we report the isolation of a novel alfalfa cyclin gene, "termed" cycMs3 (for cyclin *Medicago sativa*), by selecting for mating type "alpha" - "pheromone"-induced cell cycle arrest suppression in yeast. The central region of the predicted amino acid sequence of the cycMs3 gene is most similar to the cyclin box of yeast B-type and mammalian A- and B-type cyclins. In situ hybridization showed that cycMs3 mRNA can be detected only in proliferating cells and not in differentiated alfalfa cells. When differentiated G<sub>0</sub>-arrested cells were induced to reenter the cell cycle in the G<sub>1</sub> phase and resume cell division by treatment with plant hormones, cycMs3 transcript levels increased long before the onset of DNA synthesis. In contrast, histone H3-1 mRNA and cycMs2 transcripts were not observed before DNA replication and mitosis, respectively. In addition, cycMs3 mRNA was found in all stages of the cell cycle in synchronously dividing cells, whereas the cycMs2 and histone H3-1 genes showed a G<sub>2</sub>-to-M phase- or S phase-specific transcription pattern, respectively. These data suggest that the role of cyclin CycMs3 differs from that of CycMs1 and CycMs2. We propose that CycMs3 helps control reentry of quiescent G<sub>0</sub>-arrested cells into the G<sub>1</sub> phase of the cell cycle.

L4 ANSWER 9 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1995 205176 BIOSIS  
DN PREV199598219476

TI One-step enzymatic hydrolysis of starch using a recombinant strain of *Saccharomyces cerevisiae* producing alpha-amylase, glucoamylase and pullulanase

AU Janse, B J H; Pretorius, I S (1)  
CS (1) Inst Biotechnol, Univ Stellenbosch, Stellenbosch South Africa  
SO Applied Microbiology and Biotechnology, (1995) Vol 42, No 6, pp 878-883  
ISSN 0175-7598

DT Article  
LA English

AB A recombinant strain of *Saccharomyces cerevisiae* was constructed that contained the genes encoding a bacterial alpha-amylase (AMY1), a yeast glucoamylase (STA2) and a bacterial pullulanase (pullA). The *Bacillus amyloliquefaciens* alpha-amylase and *S. cerevisiae* var diastaticus glucoamylase genes were expressed in *S. cerevisiae* using their native promoters and the encoded enzymes secreted under direction of their native leader sequences. In contrast, the *Klebsiella pneumoniae* pullulanase gene was placed under the control of the yeast alcohol dehydrogenase gene promoter (ADC1-P) and secreted using the yeast mating pheromone alpha-factor secretion signal ("MF\*\*\* - "alpha\*\*\* - "I\*\*\*"). Transcription "termination" of the pullulanase gene was effected by the yeast tryptophan synthase gene "terminator" (TRP5-T) whereas "termination" of the glucoamylase and alpha-amylase genes was directed by their native "terminators". Pullulanase (PUL1) produced by recombinant yeasts containing ADC1-P "MF\*\*\* - "alpha\*\*\* - "I\*\*\*" - S pullA TRP5-T (designated PUL1) was

further characterized and compared to its bacterial counterpart (Pu1A). The different genes were introduced into *S. cerevisiae* in different combinations and the various amyloytic *Saccharomyces* transformants compared to *Schwanioromyces occidentalis*. Introduction of PUL1 into a *S. cerevisiae* strain containing both STA2 and AMY1 resulted in 99% assimilation of starch.

L4 ANSWER 10 OF 78 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1995 108081 BIOSIS  
DN PREV199598122381

TI *Saccharomyces cerevisiae* CNE1 Encodes an Endoplasmic Reticulum (ER) Membrane Protein with Sequence Similarity to Calnexin and Calreticulin and Functions as a Constituent of the ER Quality Control Apparatus

AU Parlati, Francesco; Dominguez, Michel; Bergeron, John M.; Thomas, David Y (1)

CS (1) Natl Res Council Canada, Biotechnol Res Inst, 6100 Royalmount Ave, Montreal PQ H4P 2R2 Canada

SO Journal of Biological Chemistry, (1995) Vol 270, No 1, pp 244-253  
ISSN 0021-9258

DT Article

LA English

AB We have used a polymerase chain reaction strategy to identify in the yeast *Saccharomyces cerevisiae* genes of the mammalian calnexin/calreticulin family, and we have identified and isolated a single gene, CNE1. The protein predicted from the CNE1 DNA sequence shares some of the motifs with calnexin and calreticulin, and it is 24% identical and 31% similar at the amino acid level with mammalian calnexin. On the basis of its solubility in detergents and its lack of extraction from membranes by 2.5 M urea, high salt, and sodium carbonate at pH 11.5, we have established that Cne1p is an integral membrane protein. However, unlike calnexins, the predicted carboxyl "terminator" membrane-spanning domain of Cne1p "terminates" directly. Furthermore, based on its changed mobility from 76 to 60 kDa after endoglycosidase H digestion Cne1p was shown to be N-glycosylated. Localization of the Cne1p protein by differential and analytical subcellular fractionation as well as by confocal immunofluorescence microscopy showed that it was exclusively located in the endoplasmic reticulum (ER), despite the lack of known ER retention motifs. Although six Ca<sup>2+</sup>-binding proteins were detected in the ER fractions, they were all soluble proteins, and Ca<sup>2+</sup> binding activity has not been detected for Cne1p. Disruption of the CNE1 gene did not lead to inviable cells or to gross effects on the levels of secreted proteins such as "alpha" - "pheromone" or acid phosphatase. However, in CNE1 disrupted cells, there was an increase of cell-surface expression of an ER-disrupted temperature-sensitive mutant of the "alpha" - "pheromone" receptor, ste2-3p, and also an increase in the secretion of heterologously expressed mammalian alpha-1 antitrypsin. Hence, Cne1p appears to function as a constituent of the *S. cerevisiae* ER protein quality control apparatus.

=> s L1 and (AOX1 (3a) promoter or term?)

L6 162 L1 AND (AOX1 (3A) PROMOTER OR "TERM")

=> dup rem 16

PROCESSING COMPLETED FOR L6

L7 96 DUP REM L6 (66 DUPLICATES REMOVED)

=> s AOX1 (3a) (promoter or termina?)

L8 300 AOX1 (3A) (PROMOTER OR TERMINA?)

=> s L1 and L8

L9 4 L1 AND L8

=> dup rem 19

PROCESSING COMPLETED FOR L9

L10 4 DUP REM L9 (0 DUPLICATES REMOVED)

=> d bib b1s 1.

YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N) y

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2002 575222 CAPLUS

DN 137 136056

TI Combinatorial expression libraries with individual members of the library containing concatemers of expression cassettes

IN Goldsmith, Neil; Sorensen, Alexandra M P; Santana, Neisen; Soren V S

PA Evolva Biotech A/S, Den

SO PCT Int App 115 pp

CODEN PIXX02

DT Patent

LA English

FAN CNT 1

PATENT NO KIND DATE APPLICATION NO DATE

PI WO 2002059297 A2 20020801 WO 2002-DK56 20020125  
W AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, F, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
PL, PT, RO, RU, SD, SE, SG, SI, SL, TJ, TM, TN, TR, TT, TZ,  
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM

RW GH GM KE LS MW MZ SD SL SZ TZ U3 ZM ZW AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
PRAI DK 2001-128 A 20010125  
DK 2001-679 A 20010501  
US 2001-300863P P 20010627

AB Combinatorial gene expression libraries in which recombination between individual sequences can take place within an individual cell and methods of constructing such libraries are described. Each member of the library contains a large no. of expression cassettes that are randomly selected from a pool of cassettes during the construction of the library. Individual express on cassettes are flanked by a common pair of restriction sites and have the same promoter and terminator to regulate expression of the cloned inserts. The library of concatemers is created from a library of individual clones. This primary library, typically a cDNA library, has the individual cassette and its flanking restriction sites flanked by a second pair of restriction sites. The cassettes are released from the library and ligated into concatemers that are then cloned into a vector capable of stabilizing large inserts, esp. artificial chromosomes. The variability within the combinatorial library can be increased by using cDNA libraries from multiple sources. Cassettes within the library are free to recombine with one another to create genes encoding novel activities or functions that can be identified by selection or screening. Such libraries are useful in discovery of new or modified metabolic pathways leading to the prodn. of novel compds, for e.g. drug discovery and to the prodn. of known compds. in novel quantities or in novel compartments of the cells. The expression libraries in particular are composed of host cells capable of coordinated and controllable expression of large nos. of heterologous genes in the host cells.

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS  
AN 2002575221 CAPLUS  
DN 137 136055

TI Combinatorial expression libraries with individual members of the library containing concatemers of expression cassettes  
IN Goldsmith, Neil; Sorensen, Alexandria M; P. Santana, Nielsen, Soren V. S., Naesby, Michael  
PA Evolva Biotech A/S, Den  
SO PCT Int Appl, 124 pp  
CODEN PIKXD2  
DT Patent  
LA English  
FAN CNT 1

PATENT NO	KIND DATE	APPLICATION NO	DATE
PI WO 2002059296	A2 20020801	WO 2002-DK 55	20020125
W AE, AG AL AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, JS, JZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

RW GH GM KE LS MW MZ SD SL SZ TZ U3 ZM ZW AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
PRAI DK 2001-127 A 20010125  
US 2001-3C1022P P 20010627

AB Combinatorial gene expression libraries in which individual clones contain large nos. of expression cassettes and methods of constructing such libraries are described. Each member of the library contains a large no. of expression cassettes that are randomly selected from a pool of cassettes during the construction of the library. Individual expression cassettes are flanked by a common pair of restriction sites and have the same promoter and terminator for uniform regulation of expression of the cloned inserts. The library of concatemers is created from a library of individual clones. This primary library, typically a cDNA library, has the individual cassette and its flanking restriction sites flanked by a second pair of restriction sites. The cassettes are released from the library and ligated into concatemers that are then cloned into a vector capable of stabilizing large inserts, esp. artificial chromosomes. The variability within the combinatorial library can be increased by using cDNA libraries from multiple sources. Such libraries are useful in discovery of new or modified metabolic pathways leading to the prodn. of novel compds, for e.g. drug discovery and to the prodn. of known compds. in novel quantities or in novel compartments of the cells. The expression libraries in particular are composed of host cells capable of coordinated and controllable expression of large nos. of heterologous genes in the host cells.

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS  
AN 2000133856 CAPLUS  
DN 132 179658

TI Mass secretion/expression system for unglycosylated human MK family proteins in methylotrophic yeast

IN Murasugi, Akira; Asami, Yukio; Kido, Isao; Kumai, Hideki

PA Meiji Milk Products Co. Ltd., Japan

SO PCT Int Appl, 58 pp

CODEN PIKXD2

DT Patent

LA Japanese

FAN CNT 1

PATENT NO	KIND DATE	APPLICATION NO	DATE
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PI WO 2000003718 A1 20000224 WO 1999-JP4332 19990810  
W AU, CA, CN, JP, KR, US  
RW AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

CA 2339350 AA 20000224 CA 1999-2339350 19990810

AU 9950674 A1 20000306 AU 1999-50674 19990810

EP 1106697 A1 20010613 EP 1999-935123 19990810

R AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT

IE, SI, LT, LV, FI, RO

PRAI JP 1998-236621 A 19980810

JP 1999-84533 A 19990328

WO 1999-JP4332 W 19990810

AB Large-scale secretion/expression system for unglycosylated human MK family proteins in methylotrophic yeast, *Pichia pastoris*, is described. The expression vector consists of a mature human MK family protein coding region cDNA attached to *Saccharomyces cerevisiae* "alpha"\*\*

\*\*\*\*"\*\*factor\*\* signal sequence under the control of a *Pichia*

*pastoris* methanol-inducible alc. oxidase gene (\*\*\*AOX1\*\*\*)

\*\*\*promoter\*\*\*, a transcription \*\*\*termination\*\*\* sequence, and an origin of replication. Unglycosylated human MK protein and PTN protein were mass produced in *Pichia pastoris* GS115 and SMD118 strains, and the expressed proteins demonstrated their biological activity for facilitating growth of mouse embryo fibroblast NIH3T3

RE CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1993 96649 CAPLUS

DN 118 96649

TI Secretory manufacture of human serum albumin with methylotrophic yeasts

IN Davis, Geneva Ruth Provost, Sally Ann

PA Salk Institute Biotechnology/Industrial Assoc. Inc., USA

SO PCT Int Appl, 74 pp

CODEN PIXKD2

DT Patent

LA English

FAN CNT 1

PATENT NO	KIND DATE	APPLICATION NO	DATE
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PI WO 9213951	A1 19920820	WO 1992-US1015	19920204
		W JP	

PRA US 1991-650J40 19910204

AB Human serum albumin (HSA) is manufactured in a methylotrophic yeast (*Pichia pastoris*) by expression of the gene from a MeOH-responsive promoter and the use of *Saccharomyces* or human secretory signals to ensure efficient secretion. The promoter of the *P. pastoris* alc. oxidase gene (AOX1) gene and the signal sequence from the *S. cerevisiae* alpha-mating factor gene or the human serum albumin gene signal sequence are used and the expression construct is integrated into the host genome. A synthetic gene for HSA with codon usage optimized for expression in *Pichia* was constructed by std. methods and placed under control of the \*\*\*AOX1\*\*\*

\*\*\*promoter\*\*\* with the human or yeast signal sequence, different vectors had different copy nos. of the expression cassette. The vector contains a sequence that directs integration into the HIS4 gene of *Pichia*. Fermentation regimes that maximized biomass yield by growth on glycerol as C source followed by induction with MeOH efficiently yielded cross-reacting material of the correct mo. wt.

=> d his

(FILE 'HOME' ENTERED AT 13 43 45 ON 29 JAN 2003)

FILE 'BIOSIS EMBASE, CAPLUS' ENTERED AT 13 43 58 ON 29 JAN 2003  
L1 496 S ALPH A PHEROMONE OR MF ALPH A1 OR MF ALPHA 1 OR MF ALPHA 1 OR ALP

L2 162 S L1 AND (AOX1 (3S) PROMOTER OR TERM?)

L3 96 DUP REM L2 (66 DUPLICATES REMOVED)

L4 78 S L3 AND PY<-\*999

L5 0 S L4 AND PTN

L6 162 S L1 AND (AOX1 (3A) PROMOTER OR TERM?)

L7 96 DUP REM L6 (66 DUPLICATES REMOVED)

L8 300 S ADX\* (3A) (PROMOTER OR TERMINA?)

L9 4 S L1 AND LB

L10 4 DUP REM L9 (0 DUPLICATES REMOVED)

=> S11 and (AOX1 (3s) (promoter or term?))

L11 4 L1 AND (AOX1 (3S) (PROMOTER OR TERM?))

=> S11 not L10

L12 0 L11 NOT L10

=> d his

(FILE 'HOME' ENTERED AT 13 43 45 ON 29 JAN 2003)

FILE 'BIOSIS EMBASE, CAPLUS' ENTERED AT 13 43 58 ON 29 JAN 2003  
L1 496 S ALPH A PHEROMONE OR MF ALPH A1 OR MF ALPHA 1 OR MF ALPHA 1 OR ALP

L2 162 S L1 AND (AOX1 (3S) PROMOTER OR TERM?)

L3 96 DUP REM L2 (66 DUPLICATES REMOVED)

L4 78 S L3 AND PY<=1999  
L5 0 S L4 AND PTN  
L6 162 S L1 AND (AOX1 (3A) PROMOTER OR TERM?)  
L7 96 DUP REM L6 (66 DUPLICATES REMOVED)  
L8 300 S AOX1 (3A) (PROMOTER OR TERMINA?)  
L9 4 S L1 AND LB  
L10 4 DUP REM L9 (C DUPLICATES REMOVED)  
L11 4 S L1 AND (AOX1 (3S) (PROMOTER OR TERM?))  
L12 0 S L11 NOT L10

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...Logging off of STN...

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